Glyco-Enzyme mRNA Expression in Gliomas

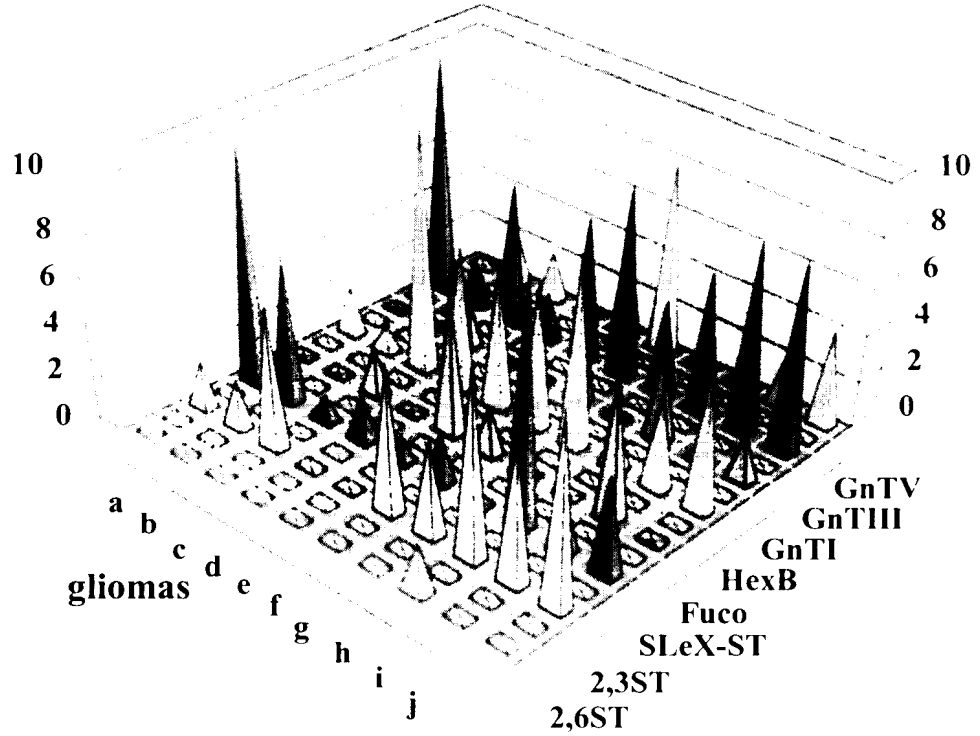


FIGURE 1

Glyco-Enzyme mRNA Expression in Meningiomas

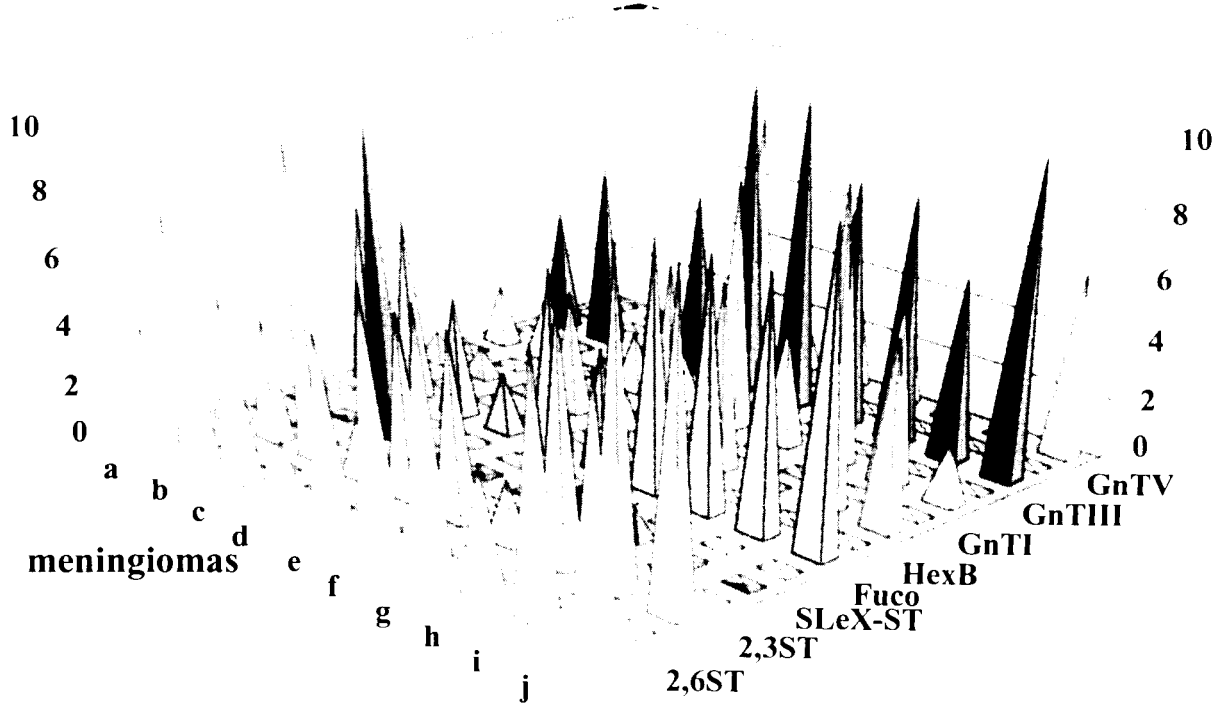


FIGURE 2

Transcriptional Regulatory Region	Nucleic Acid Encoding Glycosyltransferase

Examples of Transcriptional Regulatory Regions	**Nucleic Acid Encoding Glycosyltransferase**
CMV immediate-early enhancer/promoter	α 2,6-ST
SV40 early enhancer/promoter	α 2,3-ST
JC polyomavirus promoter	SLex-ST
Chicken β-actin promoter coupled to the CMV enhancer	Fuco
	HexB
	GnTI
	GnTIII
	GnTV

FIGURE 3

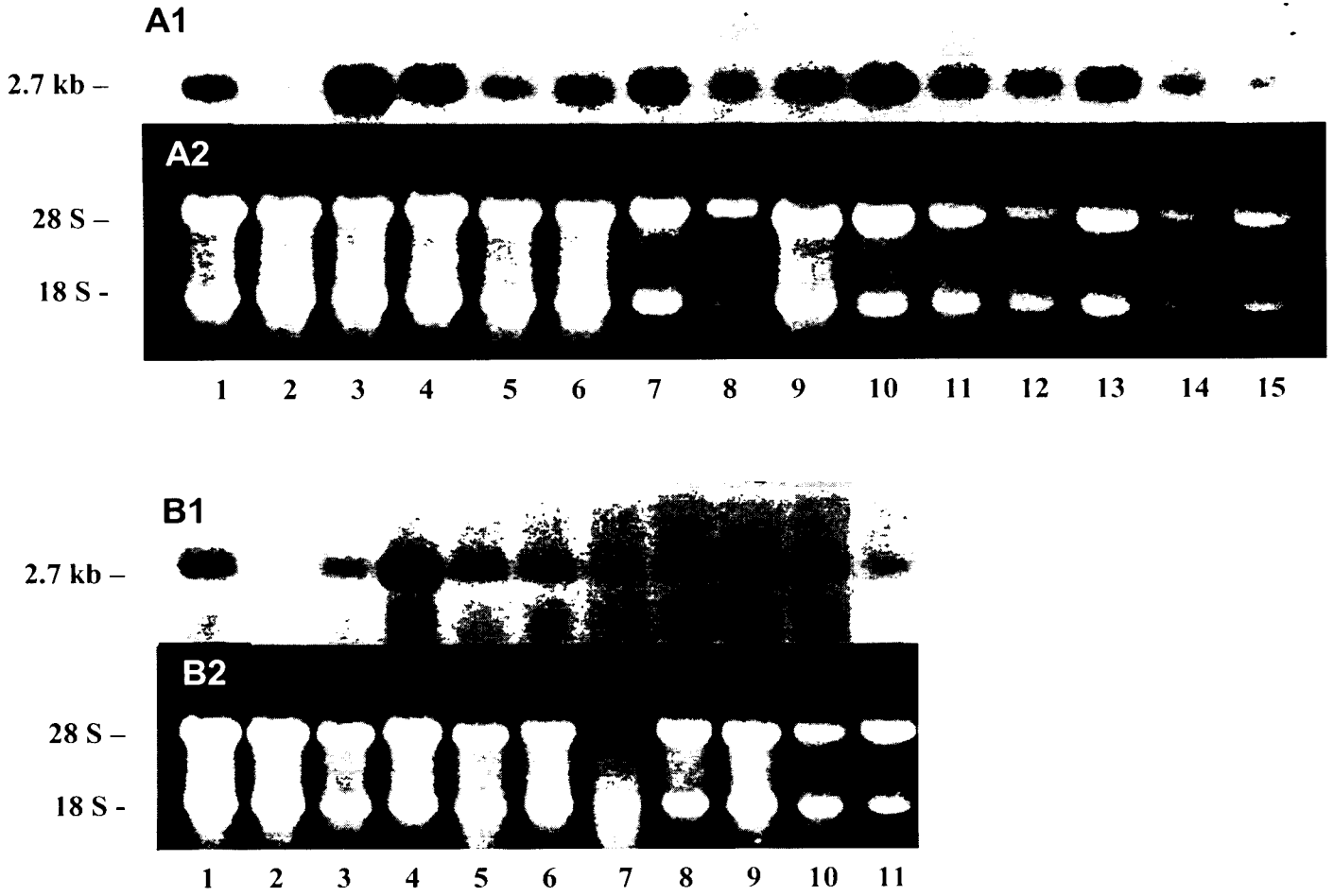


FIGURE 4

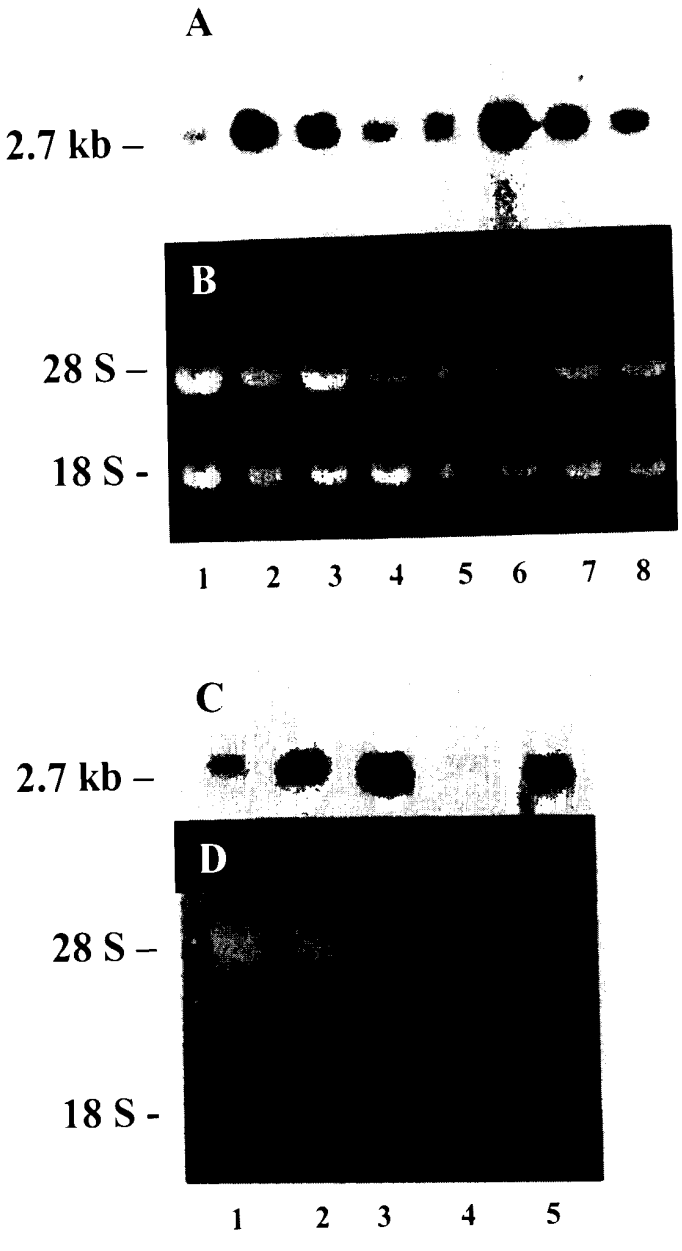


FIGURE 5

FIGURE 6

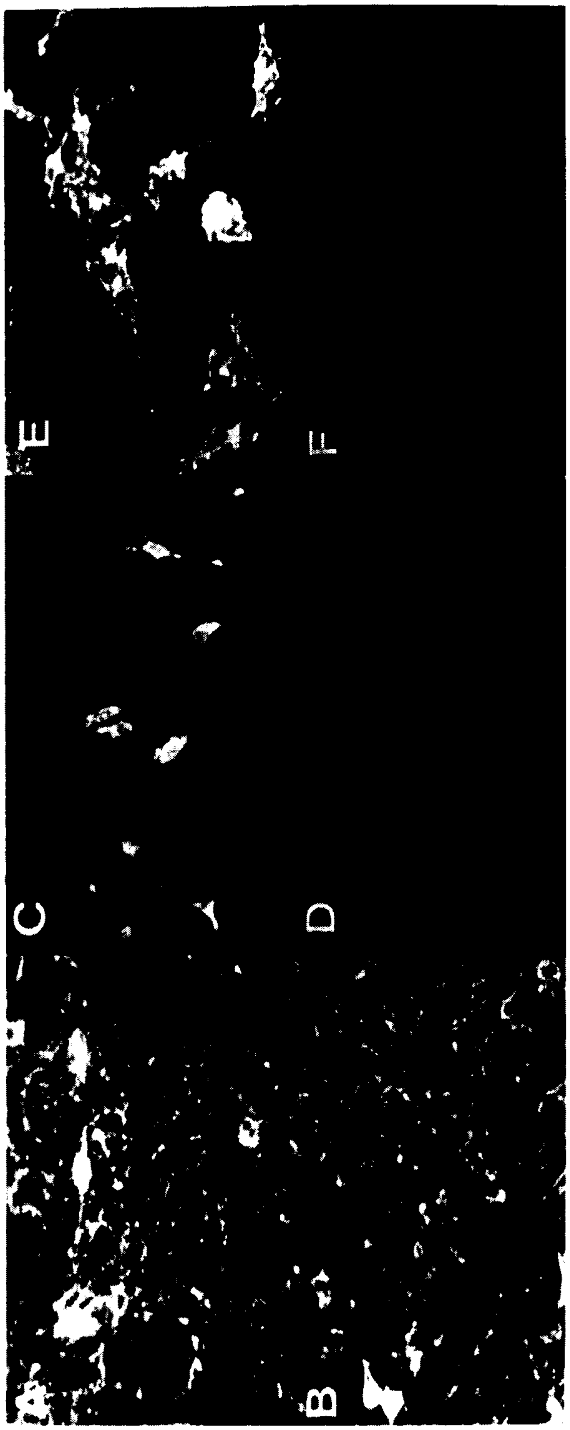


FIGURE 7

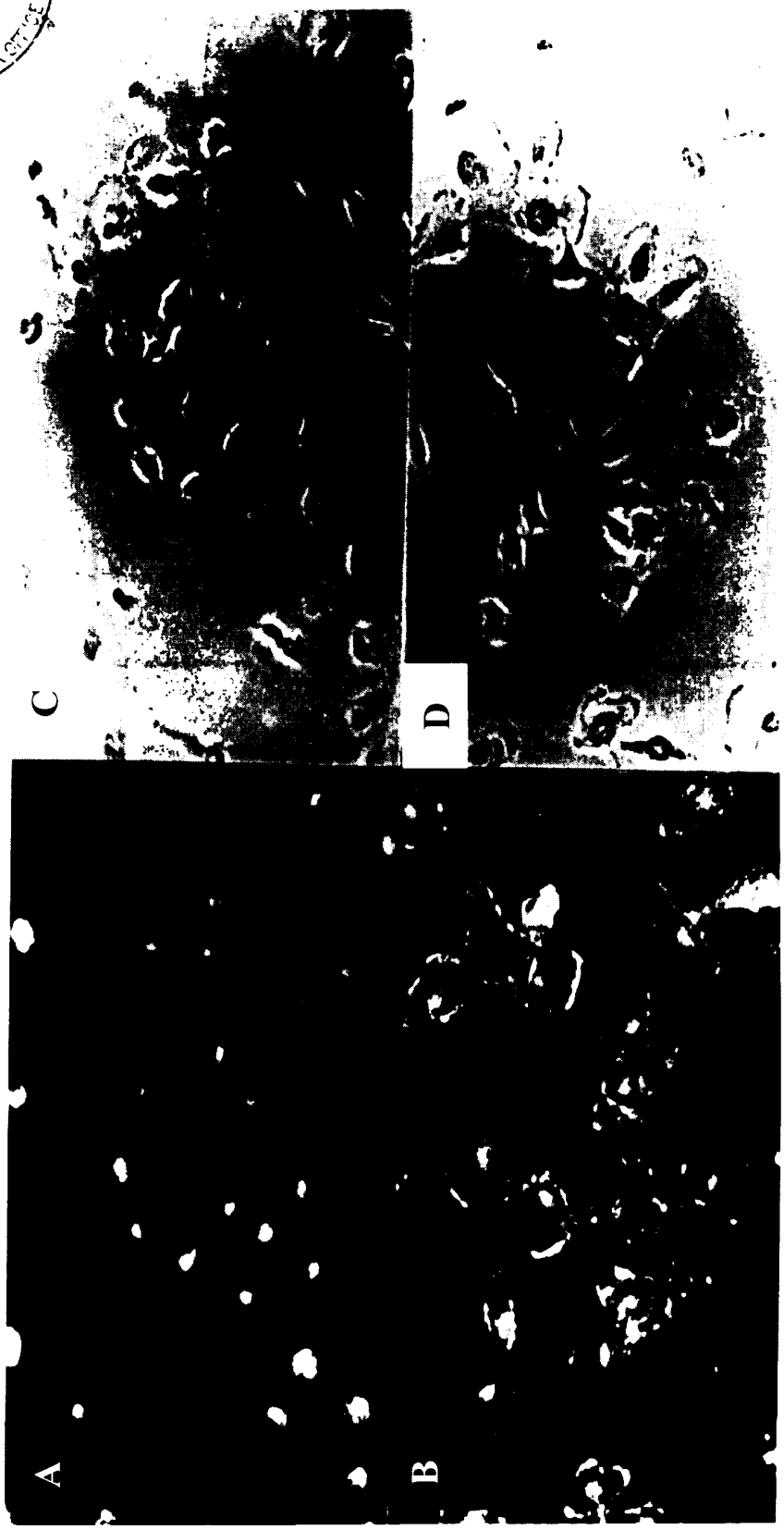


FIGURE 8

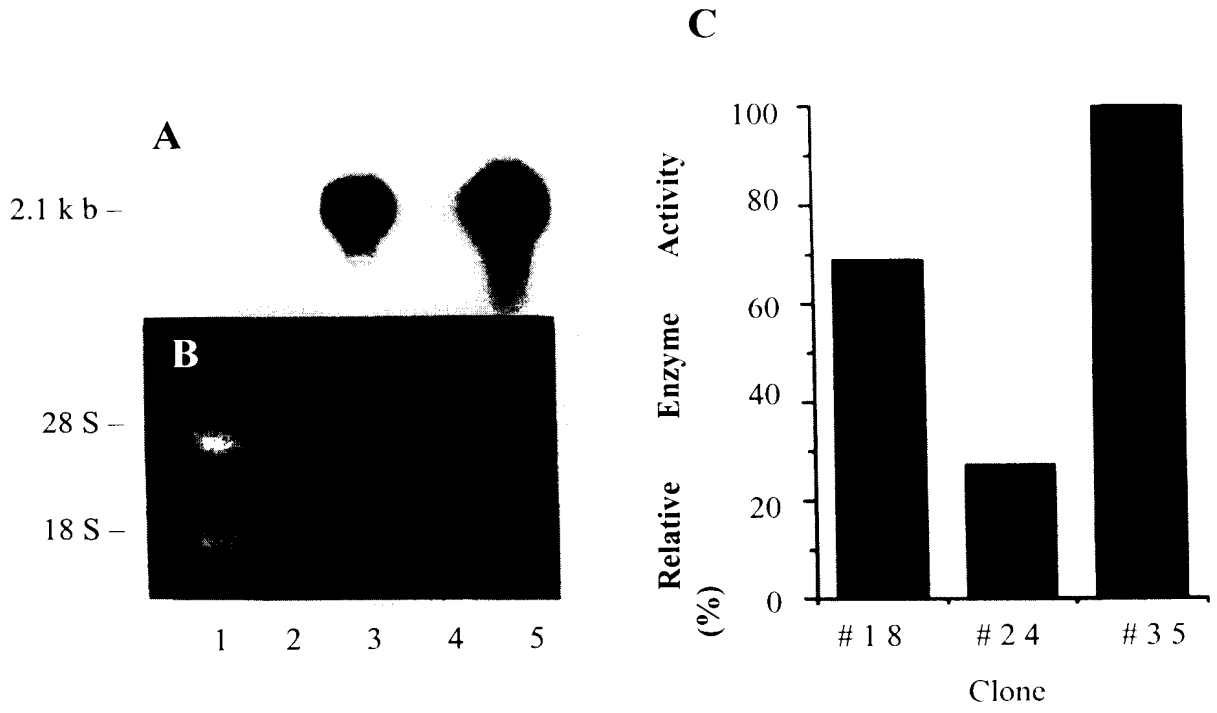


FIGURE 9

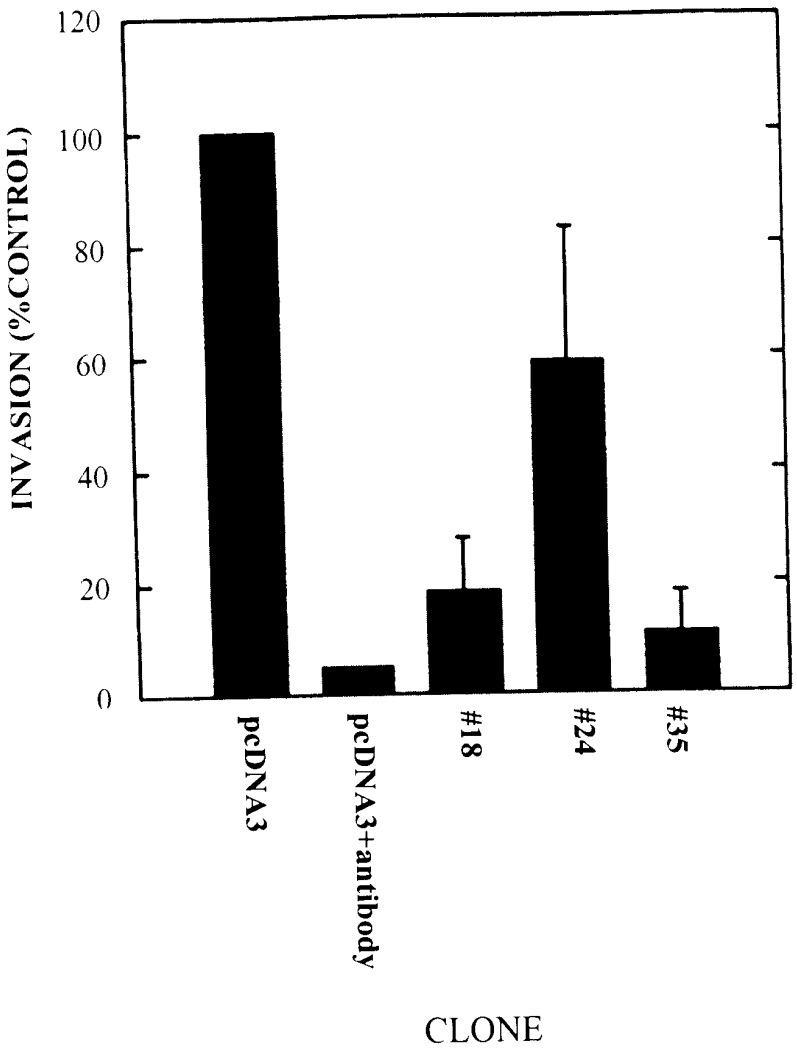


FIGURE 10

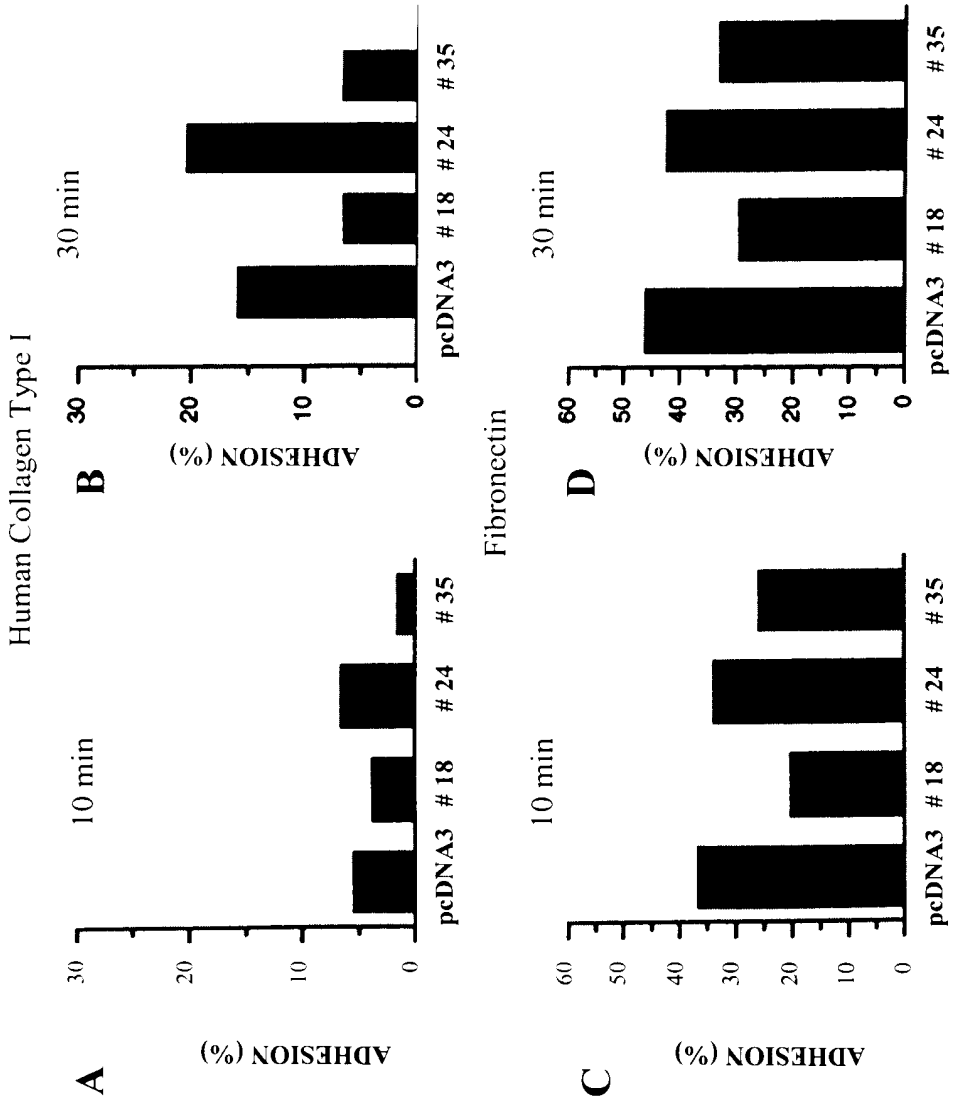


FIGURE 11

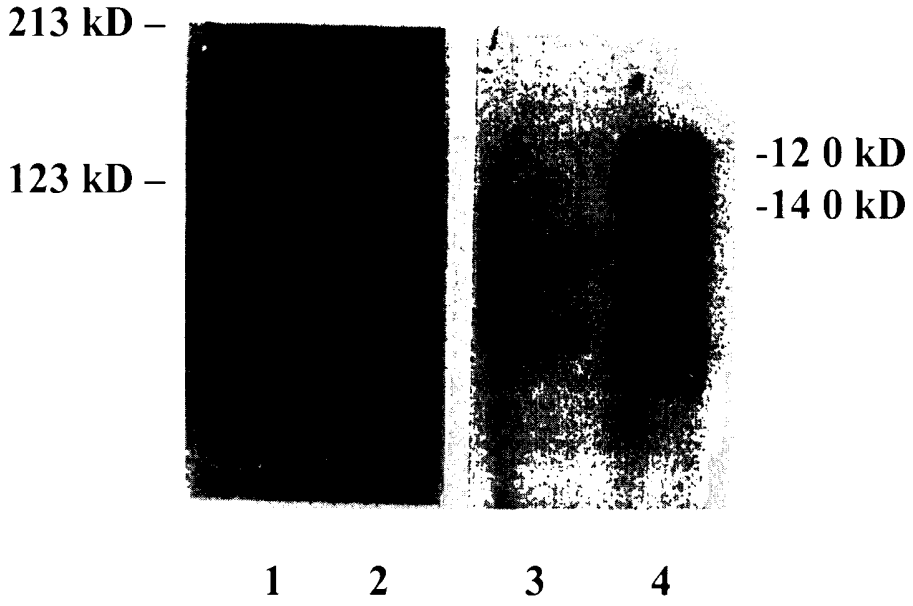


FIGURE 12

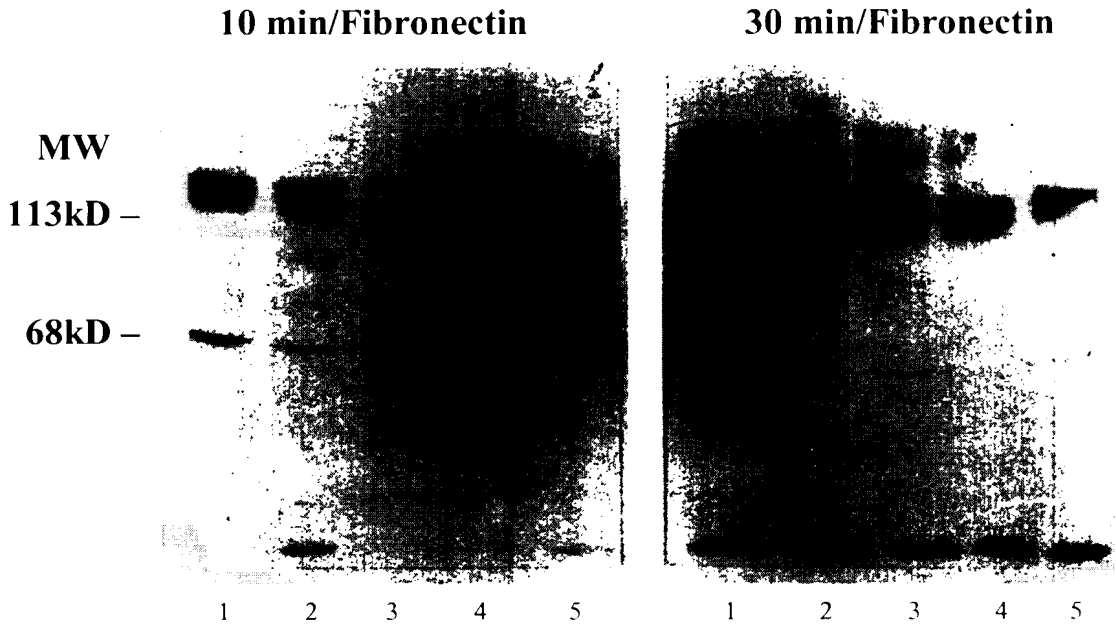


FIGURE 13

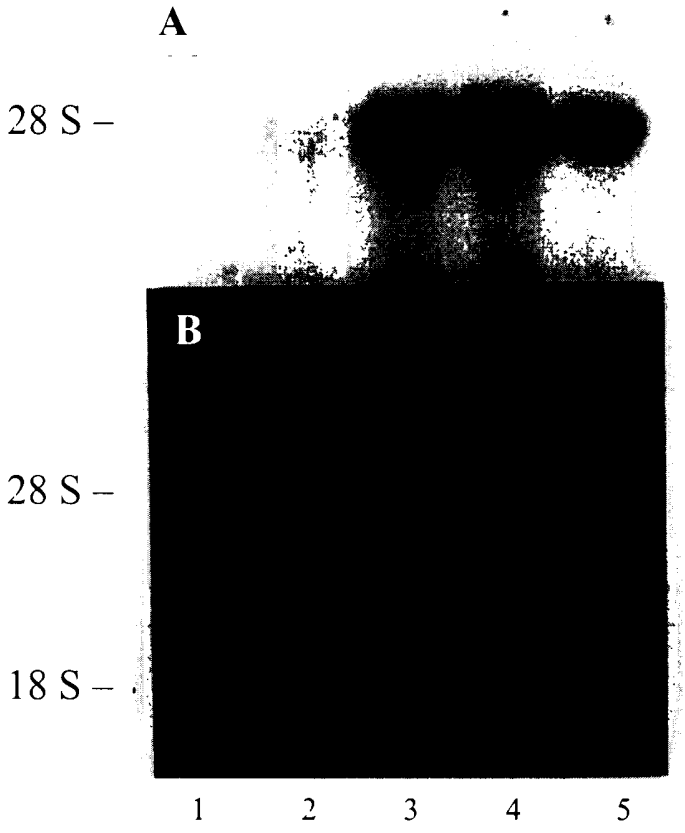
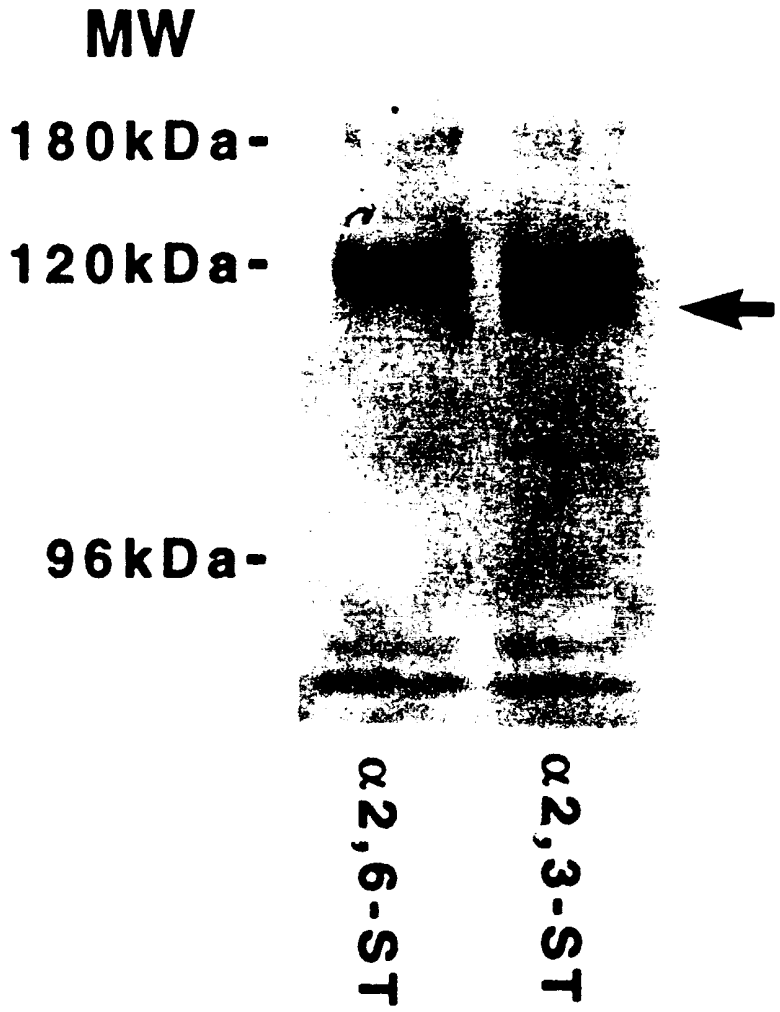


FIGURE 14

FIGURE 15



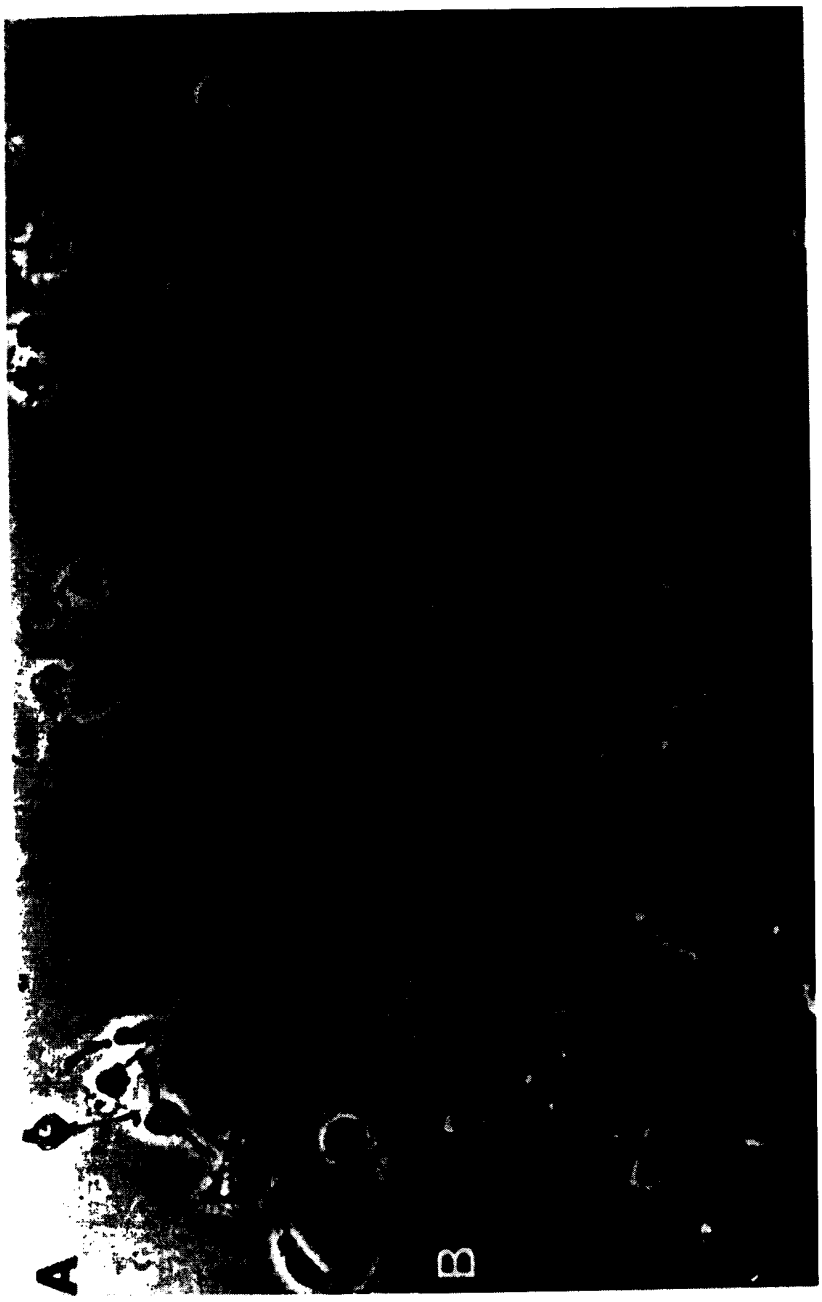


FIGURE 16

FIGURE 17

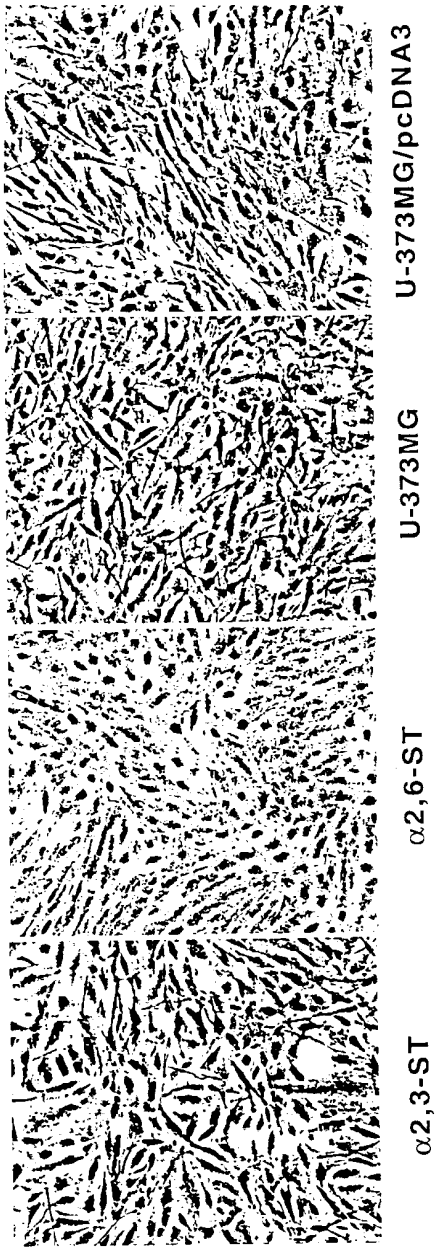
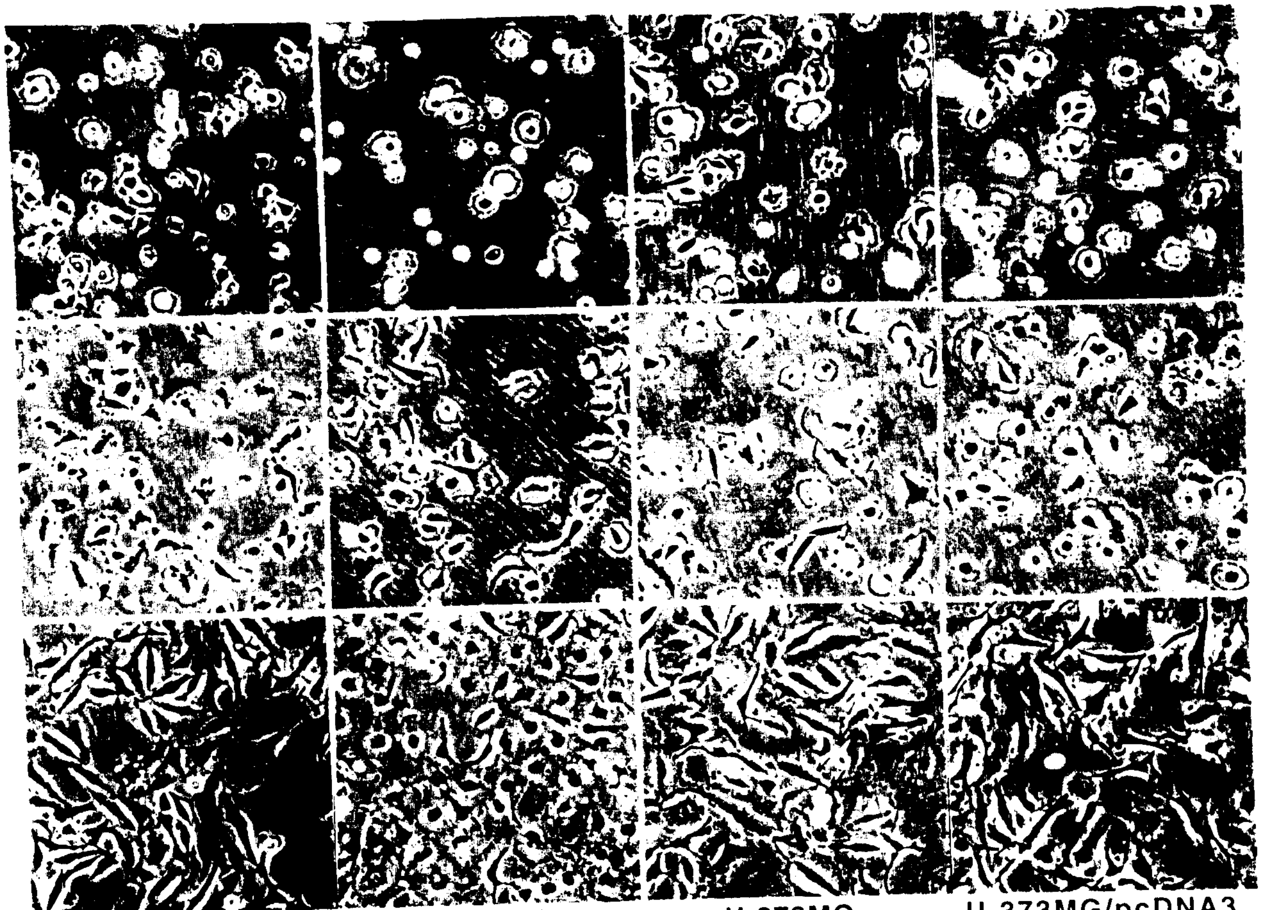


FIGURE 18

1 hr

3 hrs

24 hrs



α2,3-ST | α2,6-ST | U-373MG | U-373MG/pcDNA3

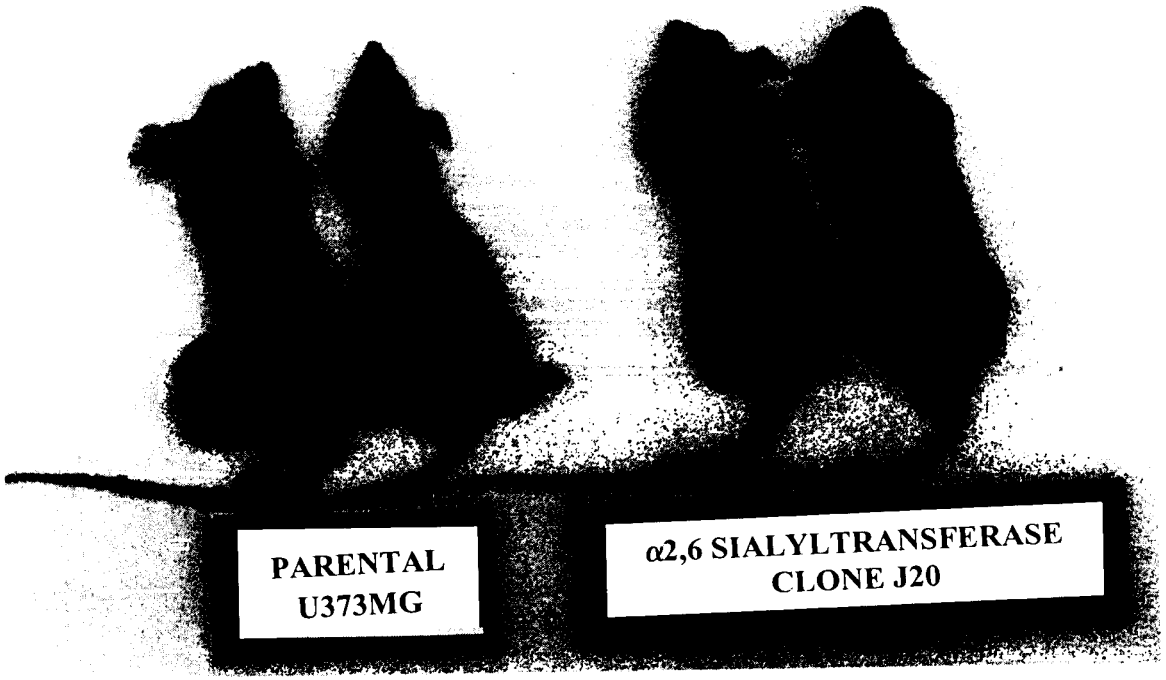


FIGURE 19

FIGURE 20

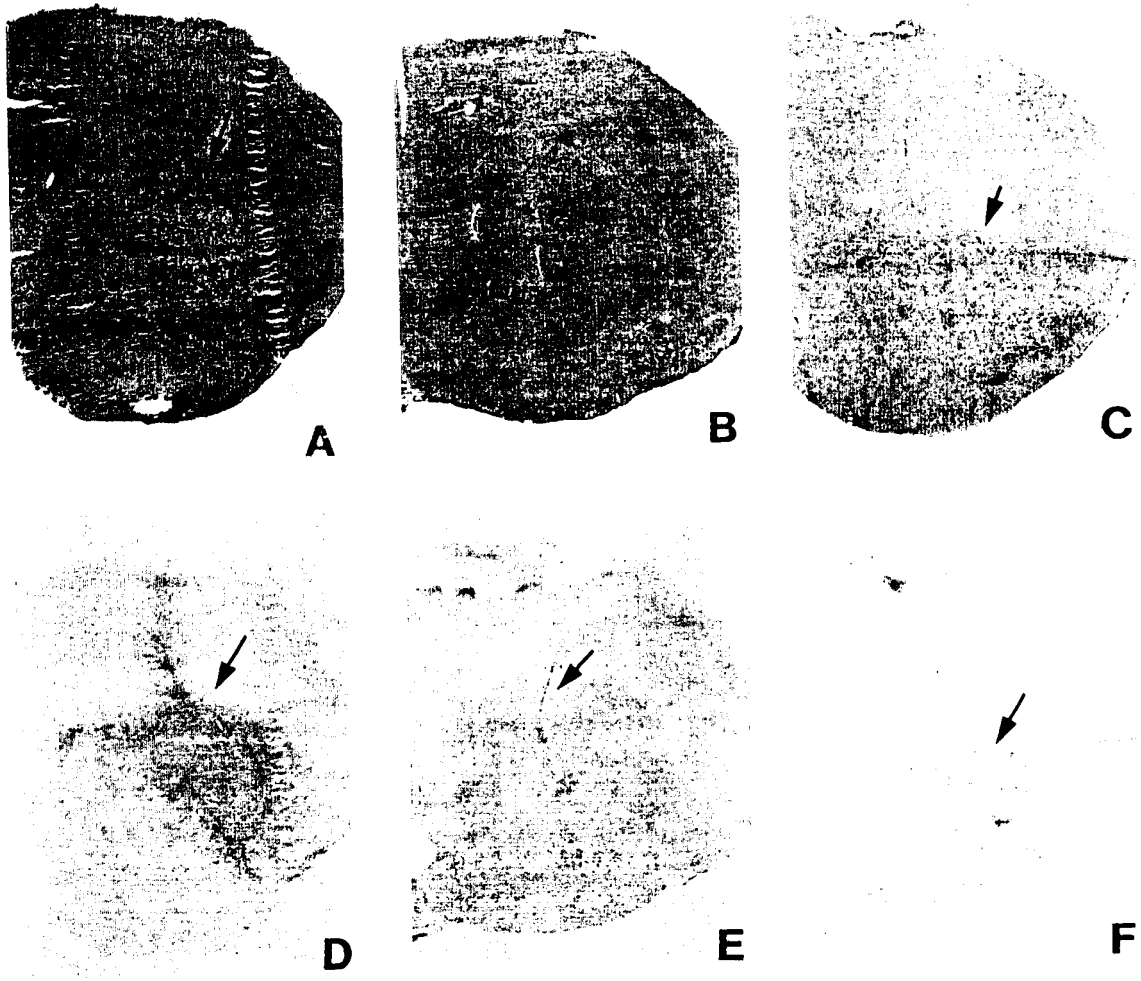


FIGURE 21

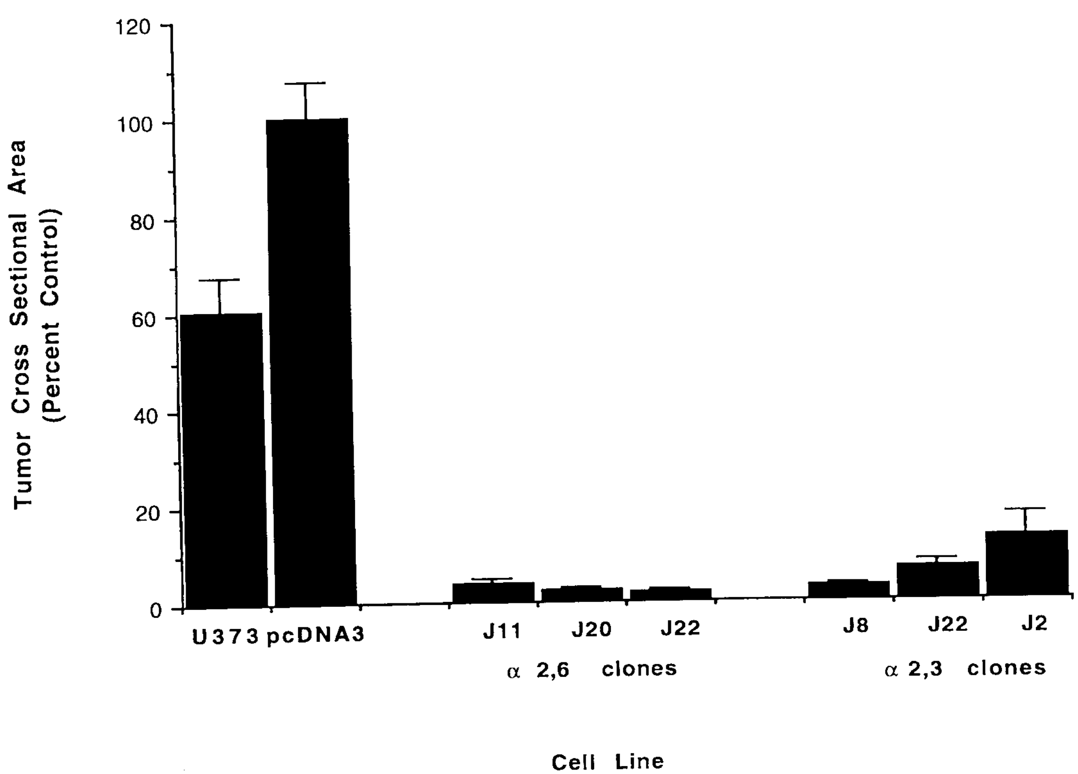


FIGURE 22

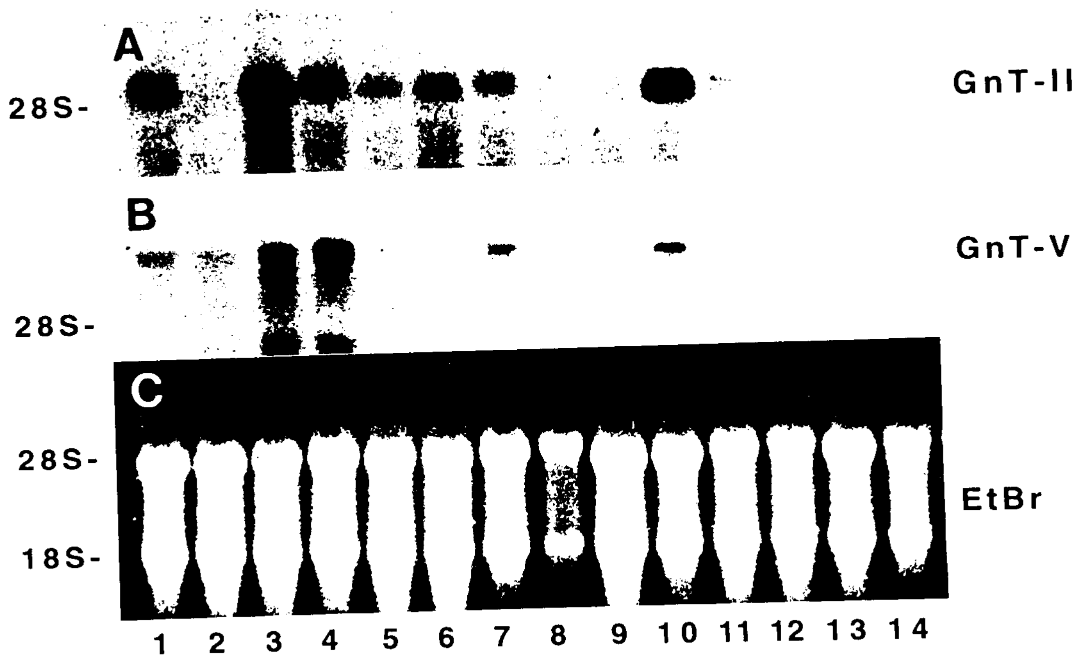


FIGURE 23

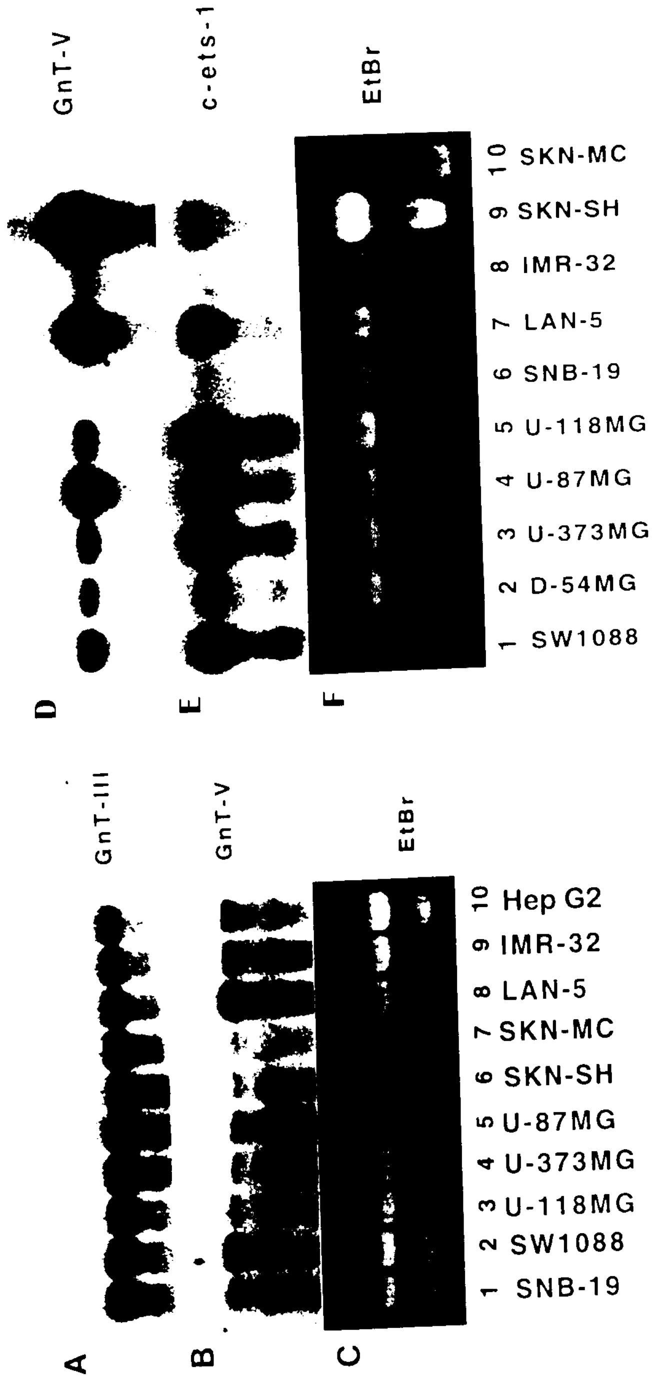


FIGURE 24

FIGURE 25

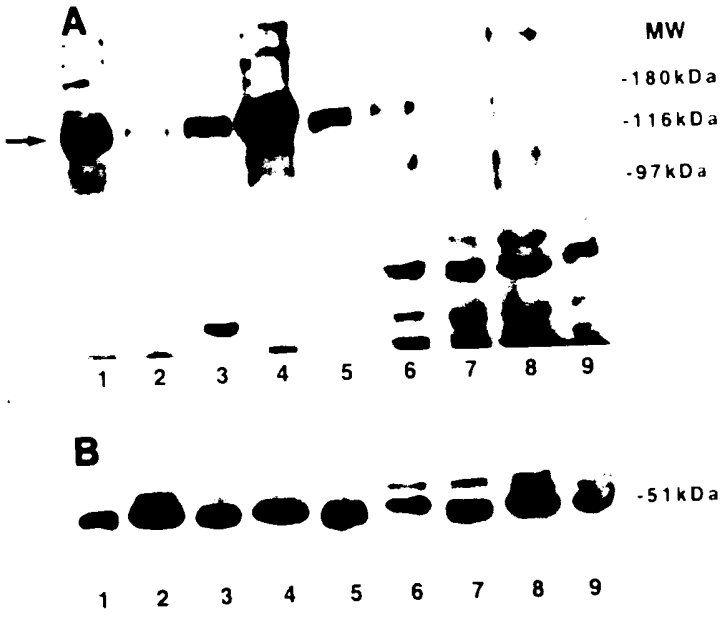
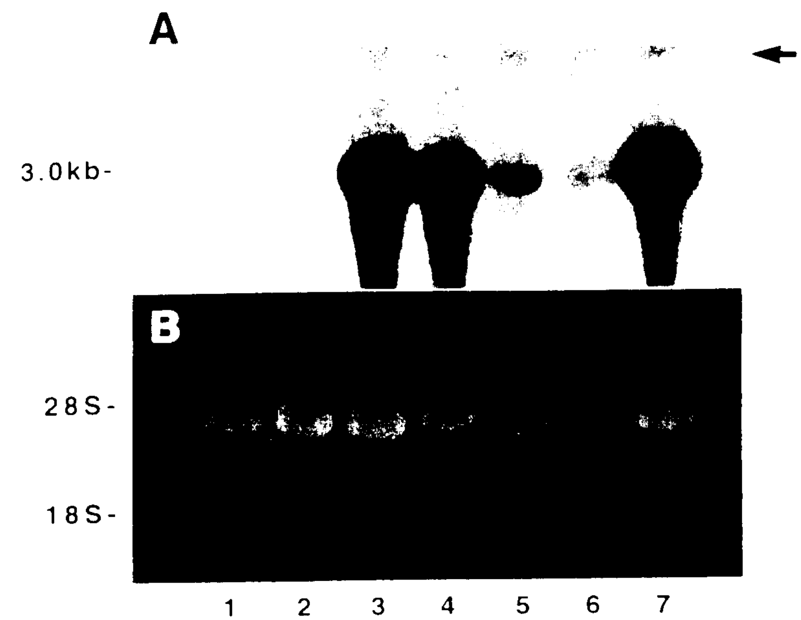


FIGURE 26



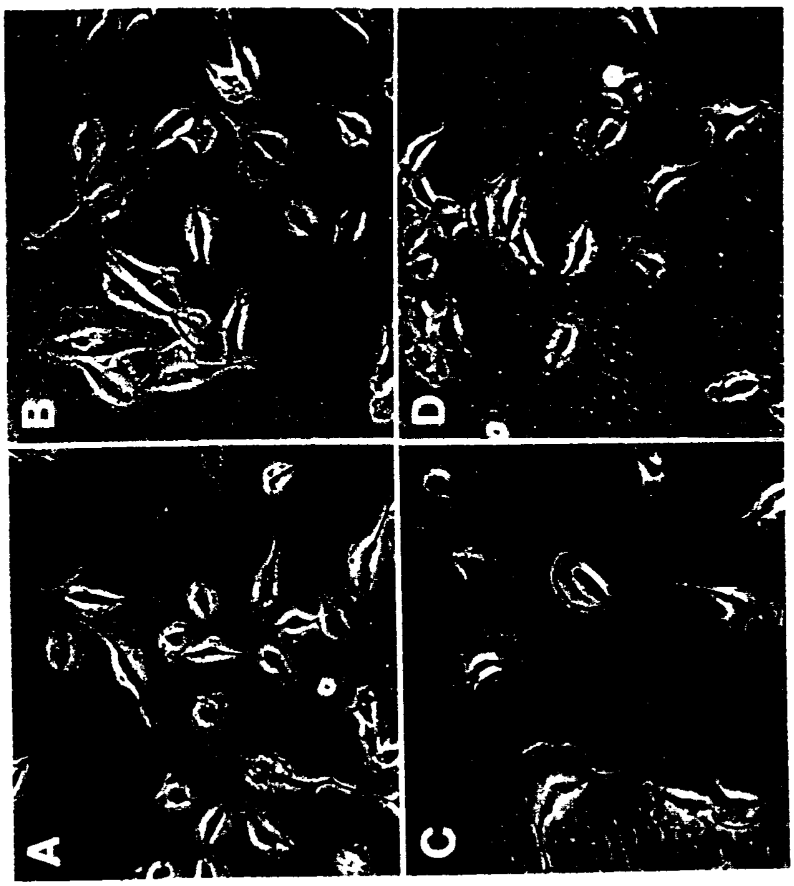


FIGURE 27

REPLACEMENT SHEET

FIGURE 28

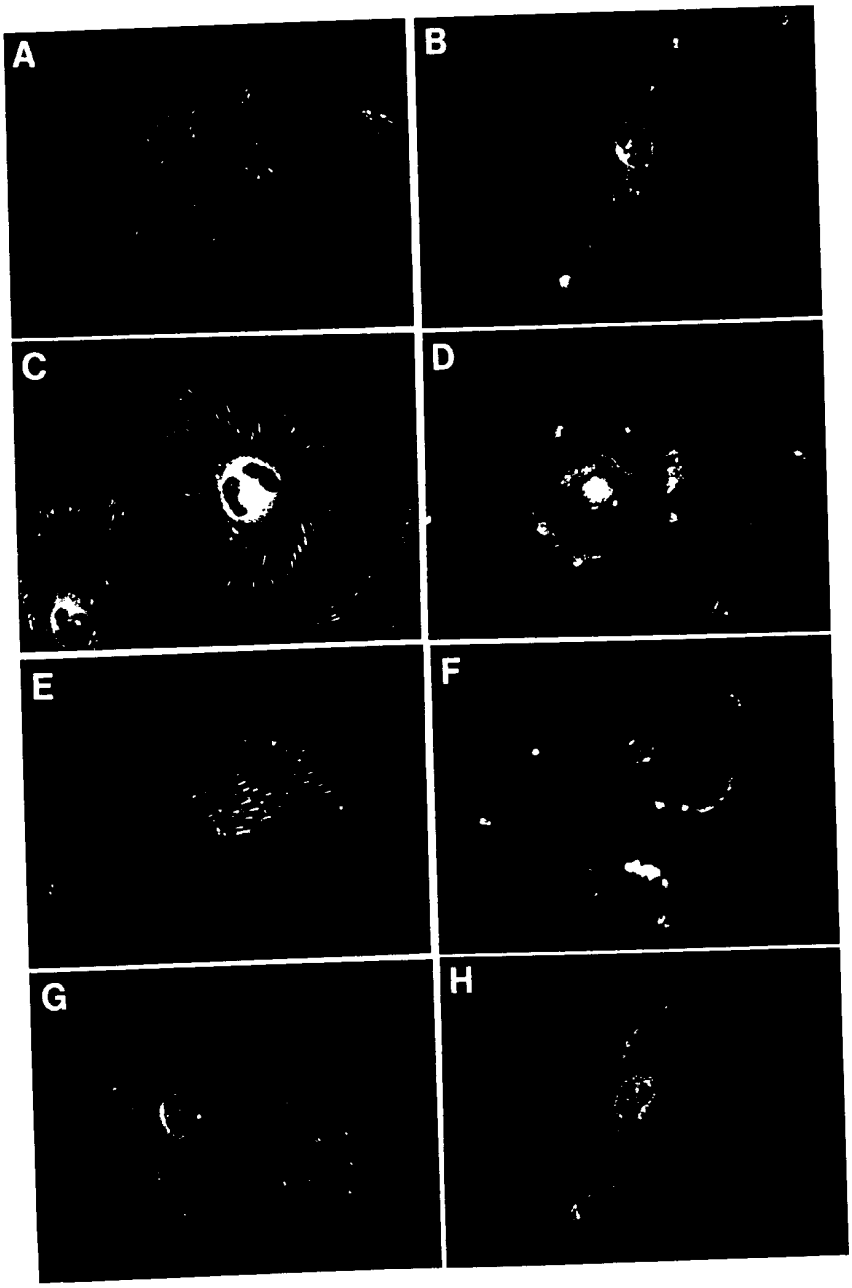
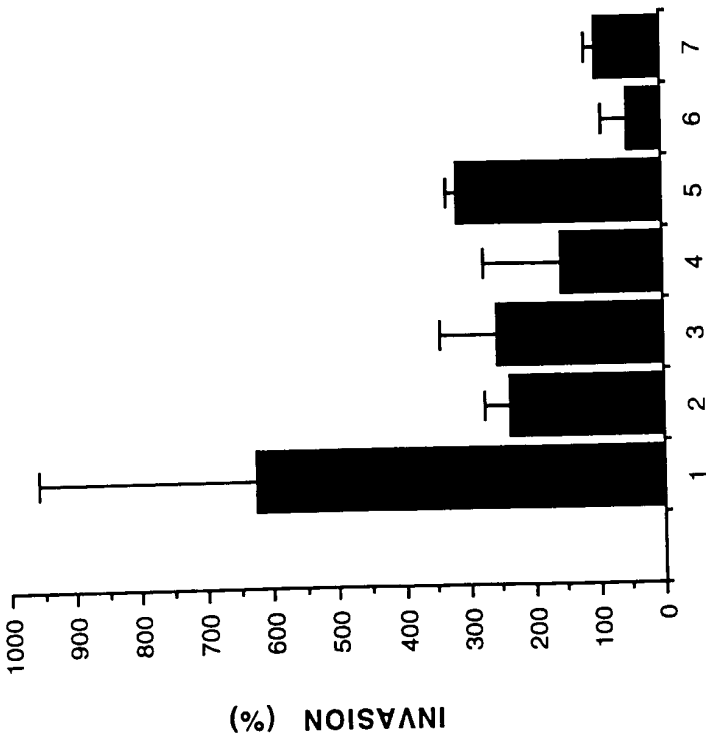


FIGURE 29



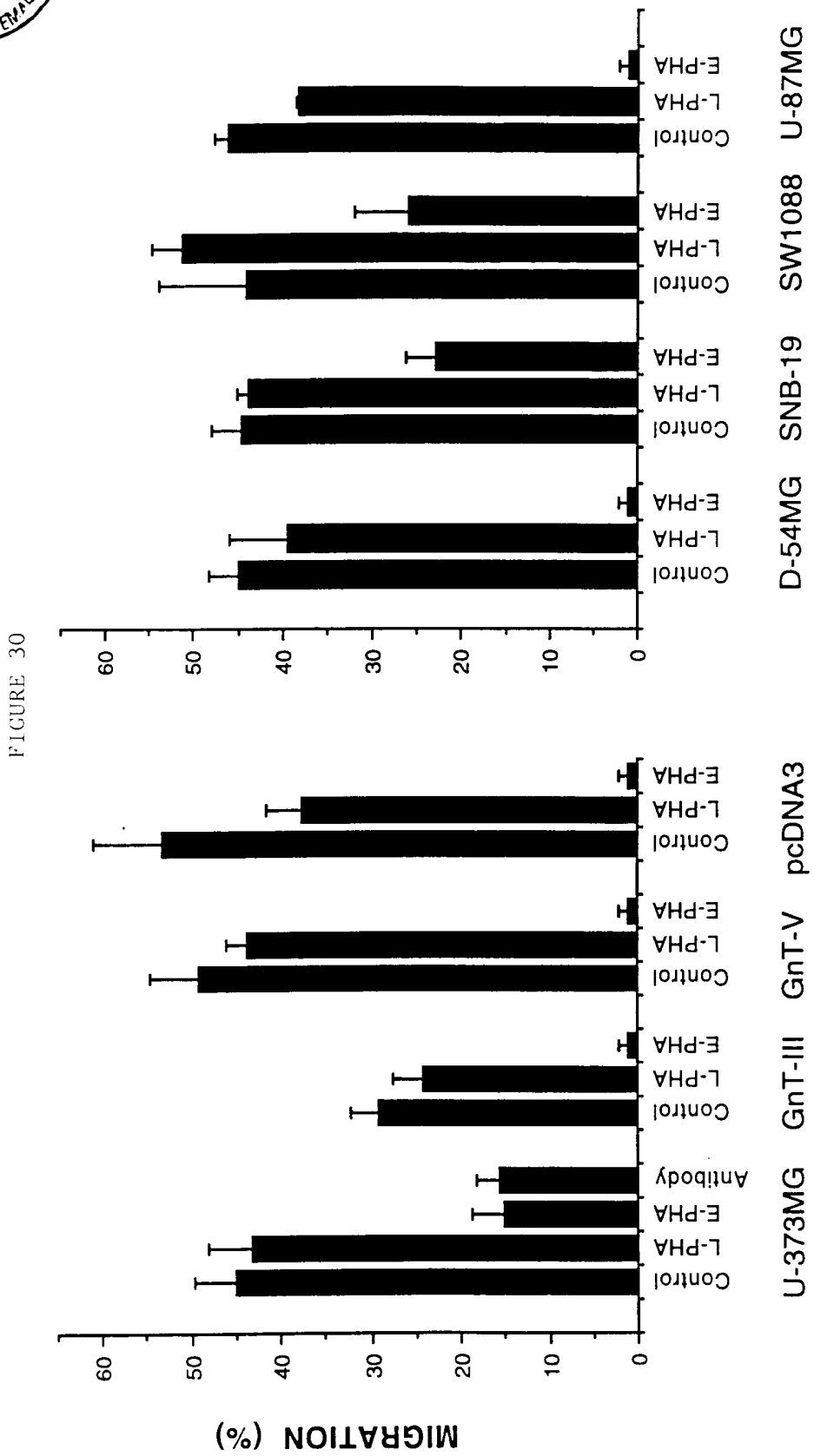
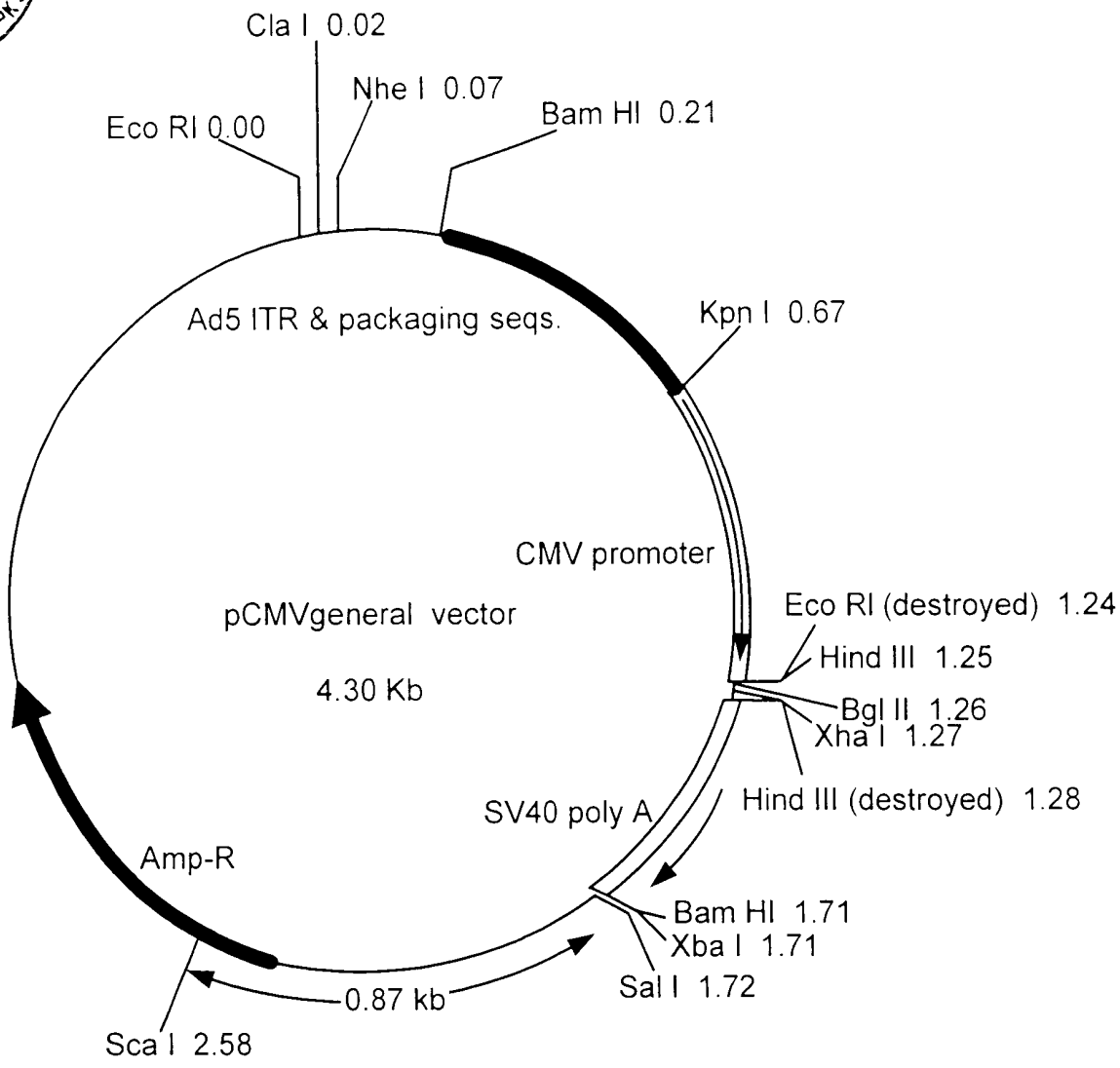


FIGURE 30



Plasmid name: pCMVgeneral vector
Plasmid size: 4.30 kb
Constructed by: Swaminathan
Construction date: June 1993
Comments/References: Starting plasmid was pCMVE4 6/7. The E4 6/7 seqs. were removed by cutting with Hind III (@1.97) and Eco RI (@1.24) and replaced with an oligo carrying Hind III, Bgl II and Xho I. The original Hind III & Eco RI sites are destroyed in this construct.

FIGURE 31A

FIGURE 31B

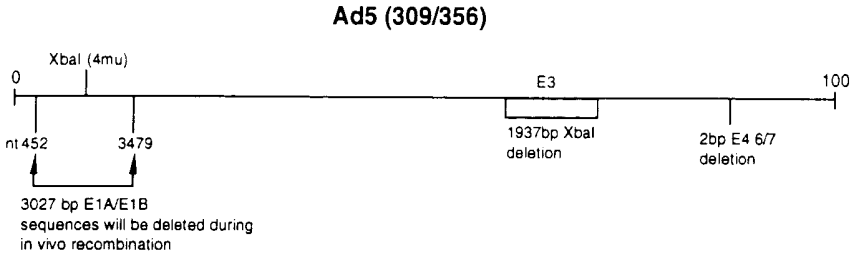
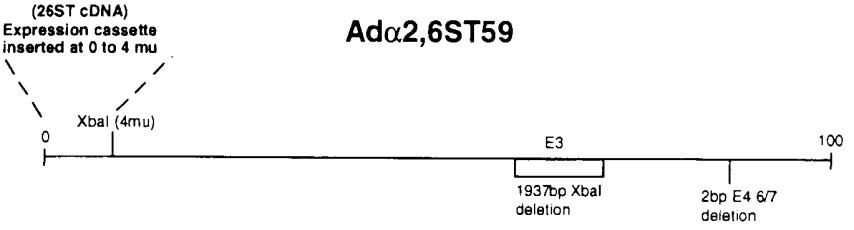


FIGURE 31C



Construction of adenoviral vector. A recombinant adenoviral vector expressing α2,6ST was constructed using the parental virus Ad5 (309/356) shown in Panel A. Panel B indicates the insertion of the α2, 6ST expression cassette into the E1a region of the parental genome as described in Materials and Methods. Elimination of the E1a region renders the new adenoviral construct replication incompetent

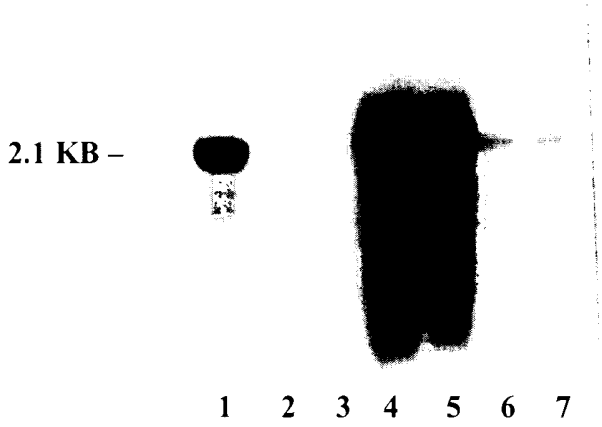
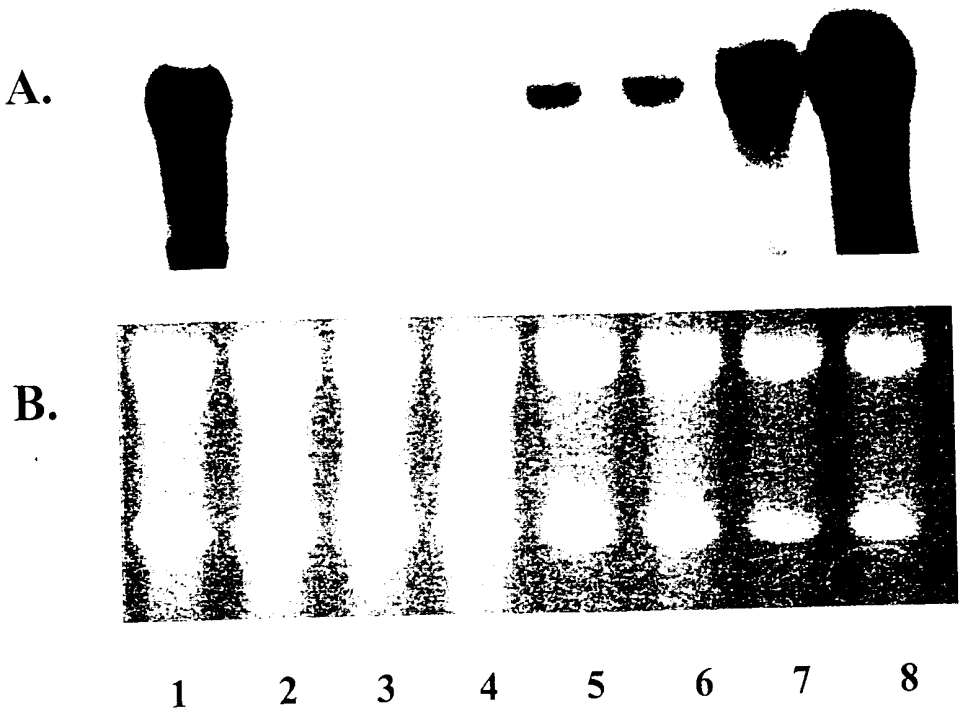


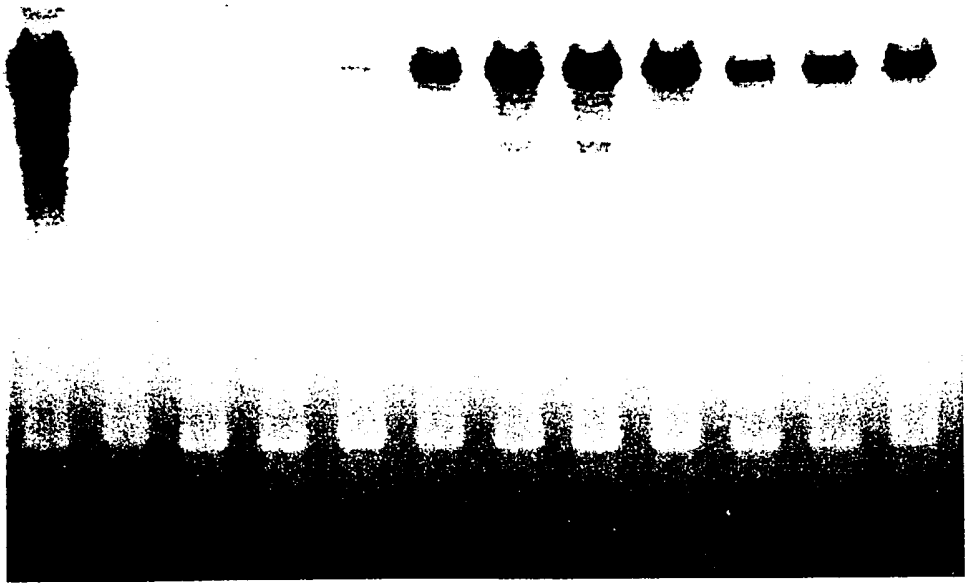
FIGURE 32

FIGURE 33



Dose-dependent expression of α2,6-ST mRNA in U-373MG cells. Lane 1: U-373MG cells 48 hours following infection with crude Adα2,6-ST virus; lane 2: U-373MG cells with no virus; lanes 3-8: U-373MG cells 48 hours following infection with, respectively, 0.02, 0.2, 2.0, 10.0, 20.0, and 200 plaque-forming units (pfu)/cell of plaque-purified Adα2,6-ST59.

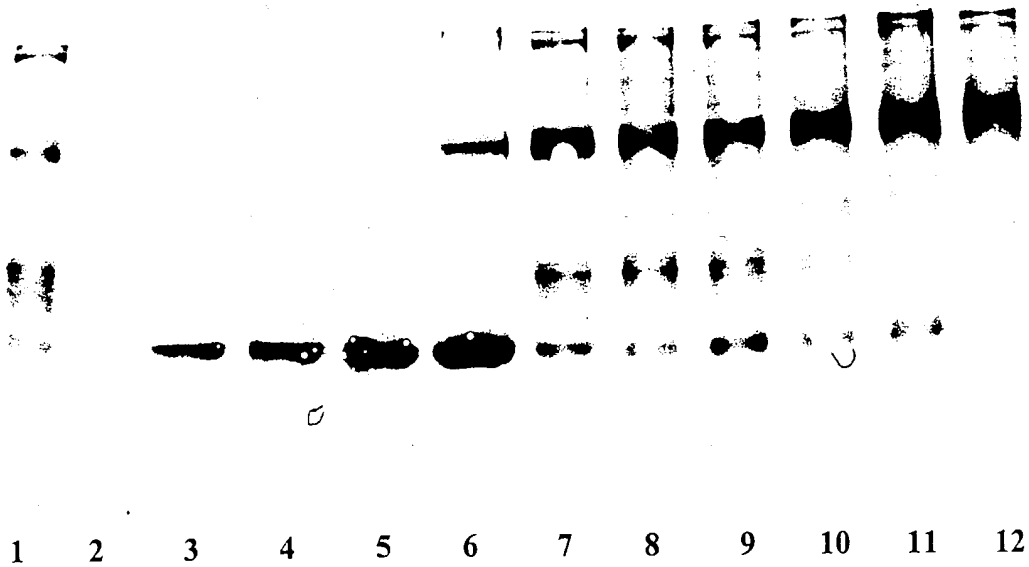
FIGURE 34



Time-dependent expression of α-2,6-ST mRNA in U-373MG glioma cells.

Lane 1: U-373MG cells stably transfected with α2,6-ST; lane 2: U-373MG cells with no virus; lane 3:U-373MG cells 3 hours after infection with 10 pfu plaque-purified Adα2,6-ST59 / cell; lanes 4 - 13: 6 hours, 12 hours, 1 day, 2 days, 3 days, 4 days, 6 days, 7 days and 8 days after infection.

FIGURE 35

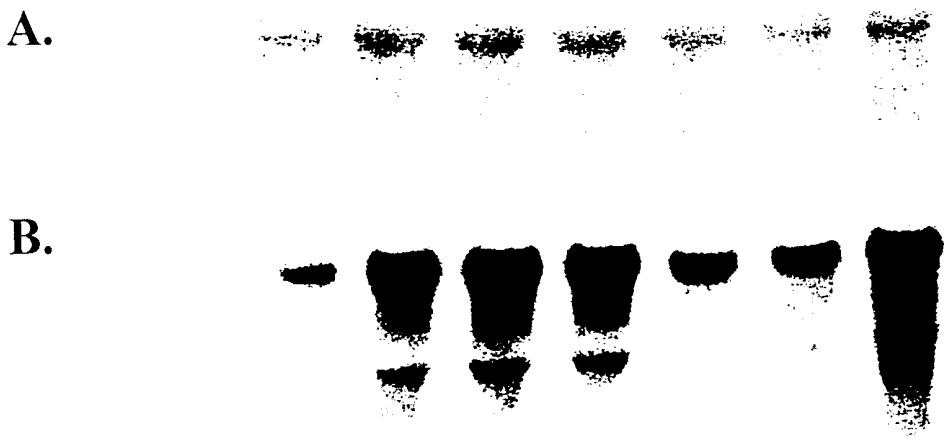


Time-dependent expression of sialyglycoconjugates in U-373MG glioma cells.

5μg total protein per lane was run on a 0.8% SDS-PAGE gel, and stained with SNA lectin. Lane 1: U-373MG cells stably transfected with α2,6-ST gene; lane 2: U-373MG cells with no virus; lane 3:U-373MG cells 3 hours after infection with 10 pfu plaque-purified Adα2,6-ST59 /cell; lanes 4 - 12: 6 hours, 12 hours, 1 day, 2days, 3 days, 4 days, 6 days, 7 days and 8 days after infection.

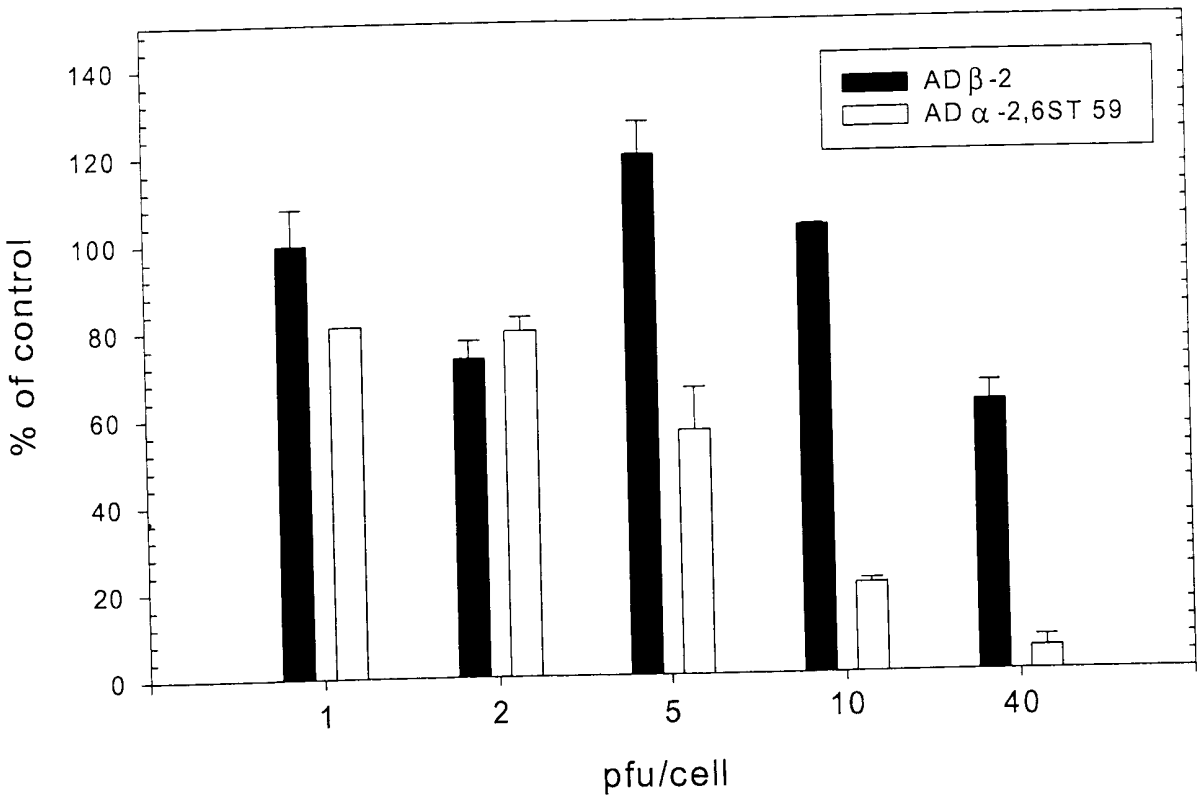
FIGURE 36

FIGURE 37



Time-dependent expression of focal adhesion kinase ($p125^{fak}$) mRNA in Adα2,6-ST59 infected U-373 MGcells.
Northern Blot probed with $p125^{fak}$ cDNA (Panel A). Panel B shows the same blot probed with α2,6-ST cDNA. Ethidium bromide staining (Panel C). Lane 1: U-373MG cells with no virus; lane 2: 1 day after infection with 10 pfu plaque-purified Adα2,6ST59/cell; lanes 3-8: 2 days, 3 days, 4 days, 6 days, 7 days and 8 days after infection with 10 pfu plaque-purified Adα2,6ST59/cell.

FIGURE 38



Inhibition of U-373MG glioma cell invasion by Adα2,6-ST59.

U-373MG glioma cells were infected with plaque-purified Adα2,6ST59 (grey bars) or a control virus, AdCMVβ2 (black bars). Cells were infected at 1, 2, 5, 10 and 40 plaque-forming units (pfu) per cell and invasion assay perfomed after a 4 day incubation period. Data is shown as percent invasion of non-virus-infected control U-373MG cells.